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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/868,699	06/20/2001	Takahisa Aoyama	L9289.01148	3222

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Stevens Davis Miller & Mosher
1615 L Street N W Suite 850
Washington, DC 20036

EXAMINER

UBILES, MARIE C

ART UNIT	PAPER NUMBER
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2642

DATE MAILED: 06/06/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/868,699

Applicant(s)

AOYAMA, TAKAHISA

Examiner

Marie C. Ubiles

Art Unit

2642

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 January 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 10-17 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 10-17 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

1. Applicant's amendment filed on January 5, 2005 has been entered. No claims have been amended. Claims 1-9 have been cancelled. Claims 10-17 have been added. Claims 10-17 are still pending in this application, with claims 10 and 17 being independent.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 10-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shoki et al. (US 6,087,986).

As for claim 10, Shoki et al. teaches a radio communication apparatus that communicates with a plurality of communicating parties (inherent functions of an *adaptive array antenna*).

Regarding the limitation reciting "...including a first communicating party to which a directivity has formed and a second communicating party to which a directivity has not formed", the Examiner believes it is obvious as read on Shoki's teachings of Col.1, lines 14-18 and 61-64. The "first communicating party to which a directivity has formed" may read on the null formed in the direction of a jamming wave; as one skilled in the art

know a "null" is often has a narrow directivity angle compared to that of the main beam; thus the null may be interpreted as "directivity [has] formed". The "second communicating party to which a directivity has not formed" reads, for example on the result obtained when the antenna forms the null (See Col. 1, lines 63-64).

The limitations regarding "a detector that detects a null point in the directivity toward the first communicating party" reads, for example on "received signal 201" of Fig. 8), "an estimator that estimates a direction where the second communicating party is present, from a direction of the null point" reads into "estimation of transmission environment 202A" and "calculation of weight amount" of Fig. 8., and "a generator that, according to the estimation result, generates a weight coefficient for use in formation of the second directivity toward the second communicating party", reads into functions performed by "setting of weight amount 203" of Fig. 8 (See also Col. 6, line 60 through Col. 7, line 10).

Further, the Examiner adds that "detecting a null point" and "using the detected null point"; both are inherent features of adaptive antenna arrays, such features are used in the suppression of jamming signals (See Col. 1, lines 6-18).

Claim 17 is rejected for the same reasons as claim 10.

Claim 11 reads, for example, on the same functions performed by the adaptive array antenna of claim 10, the antenna devices will be receiving a plurality of radiation patterns thus, the estimator will be comparing a plurality of received null points (Also Col. 1, lines 6-18). The limitations in claims 12-15 can be read on the functions performed by the adaptive array antenna as explained on Col. 1, lines 14-37.

As for claim 16, it is well-known in the art, to adjust transmission power on an adaptive array antenna based on a multiplication by a weight vector (or coefficient) of a transmission signal.

Response to Arguments

4. Applicant's arguments with respect to claims 10-17 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

5. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).


A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Marie C. Ubiles whose telephone number is (571)272-7491. The examiner can normally be reached on 9am-6pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ahmad Matar can be reached on (571) 272-7488. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Marie C. Ubiles
May 26, 2005.


AHMAD F. MATAR
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2700